

ABSTRACT

A method of controlling a drive of a vehicle during both acceleration phase and constant ground speed phase of operation is disclosed. The drive includes an engine (1) controlled by an electronic control unit (6), the engine driving an infinitely variable change-speed gear (2). The method includes setting a desired ground speed of the vehicle and repeating a cycle of steps a), b) and c) in both phases of operation. These steps are as follows:-

- a) determining any change in the torque % level (actual torque/maximum torque) of the engine.
- b) calculating a theoretical engine speed in response to the change in torque % level and the actual speed of the engine caused by the change in torque % level, said theoretical engine speed being determined with the aid of a speed dependant performance parameter characteristic of the engine (e.g. fuel consumption) stored in the control unit which defines a desired operating range of said performance parameter, to bring the engine operation back into said desired operating range of the parameter, adjusting the engine speed to the theoretical speed, and
- c) calculating and adjusting the gear ratio of the change-speed gear dependant on the theoretical engine speed of step b) to maintain the desired ground speed of the vehicle.

The first step of the cycle may be step a) or c) depending on the phase of operation of the vehicle. The method enables a quick response to change in engine load in utility vehicles of all kinds such as tractors.